



Australian Bureau of Statistics

6265.0 - Underemployed Workers, Australia, Sep 2009

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Summary

Main Features

NOTES

ABOUT THIS PUBLICATION

Underemployed workers are defined as part-time workers who want, and are available for, more hours of work than they currently have, and full-time workers who worked part-time hours during the reference week for economic reasons (such as being stood down or insufficient work being available). The number of underemployed workers are an important component of underutilised labour resources in the economy, along with the number of unemployed and some people with marginal attachment to the labour force.

This publication presents information about the characteristics of underemployed workers aged 15 years and over. For time series information on the number of underemployed workers, users are advised to use the quarterly Labour Force Survey estimates. Trend and seasonally adjusted and original estimates are released monthly in Labour Force, Australia (cat. no. 6202.0), tables 19 to 20.

The statistics in this publication were compiled from the Underemployed Workers Survey conducted throughout Australia in September 2009 as a supplement to the Australian Bureau of Statistics (ABS) monthly Labour Force Survey (LFS). A range of information is presented on underemployed workers including the number of hours usually worked, number of preferred hours, steps taken to find work with more hours and difficulties finding work with more hours.

NOTES ABOUT THE ESTIMATES

The Labour Force Survey (LFS) sample size in September 2009 was approximately 9% higher than the sample size in September 2008. This is due to re-instated sample that was cut from the LFS and supplementary surveys from July 2008. Detailed information about the sample reduction/re-instatement is provided in Information Paper: Labour Force Survey. Sample Design, Nov 2007 (Third edition) (cat. no. 6269.0).

The re-instated sample will still be representative, with selections made across all parts of Australia.

ROUNDING

As estimates have been rounded, discrepancies may occur between sums of the component items and totals.

INQUIRIES

For further information about these and related statistics, contact the National Information and Referral Service on 1300 135 070 or Labour Market Section on Canberra (02) 6252 7206.

SUMMARY COMMENTARY

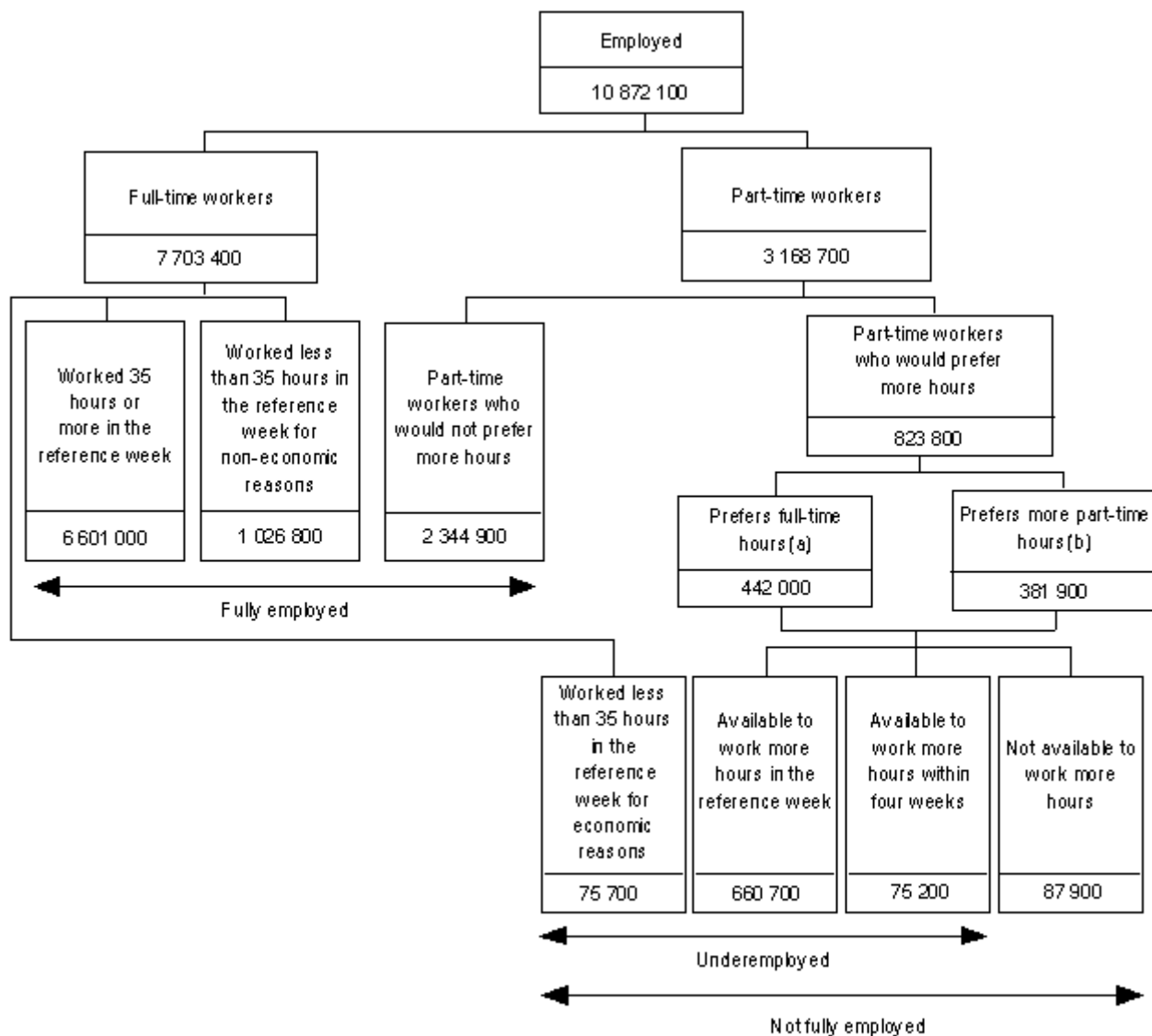
Conceptual Framework

CONCEPTUAL FRAMEWORK

CONCEPTUAL FRAMEWORK

The ABS conceptual framework for underemployment separates employed people into two mutually exclusive groups:

- workers who are considered to be fully employed, comprising:
 - employed people who worked full-time during the reference week (includes people who usually work part-time)
 - employed people who usually work full-time but worked part-time in the reference week for non-economic reasons (including illness or injury, leave, holiday or flextime, and personal reasons)
 - part-time workers (usually work part-time and did so in the reference week) who would not prefer additional hours of work.
- workers who are not fully employed, comprising:
 - part-time workers who would prefer to work more hours
 - full-time workers who worked part-time in the reference week for economic reasons (such as being stood down or insufficient work being available).



(a) Total number of hours preferred to work each week are 35 hours or more.

(b) Total number of hours preferred to work each week are between 1 to 34 hours.

The conceptual framework further defines workers who are underemployed, comprising:

- part-time workers who would prefer to work more hours and were available to start work with more hours, either in the reference week or in the four weeks following the survey
- full-time workers who worked part-time hours in the reference week for economic reasons (such as being stood down or insufficient work being available).

Summary of Findings

SUMMARY OF FINDINGS

OVERVIEW

There were 10.9 million employed people aged 15 years and over in September 2009. Of

these:

- 10 million (92%) were fully employed
- 899,500 (8%) were not fully employed of whom 811,600 were underemployed.

Of the 811,600 underemployed workers:

- 735,900 usually worked part-time but would prefer more hours and were available to start work with more hours either in the reference week, or in the four weeks following the interview
- 75,700 usually worked full-time but worked part-time hours in the reference week due to economic reasons (being stood down, on short-time, or having insufficient work).

PART-TIME WORKERS WHO WOULD PREFER MORE HOURS

In September 2009, there were 3.2 million part-time workers (2.2 million women and 938,300 men). Of all part-time workers, 26% (823,800) would prefer to work more hours, compared to 23% in September 2008.

Of the 823,800 part-time workers who would prefer more hours:

- 32% were aged 15-24 years
- 54% would prefer to work full-time, compared with 51% in September 2008
- 735,900 were available for work with more hours (452,100 women and 283,800 men), of whom 49% were looking for work with more hours
- 87,900 were not available for work with more hours, of whom 13% were looking for work with more hours.

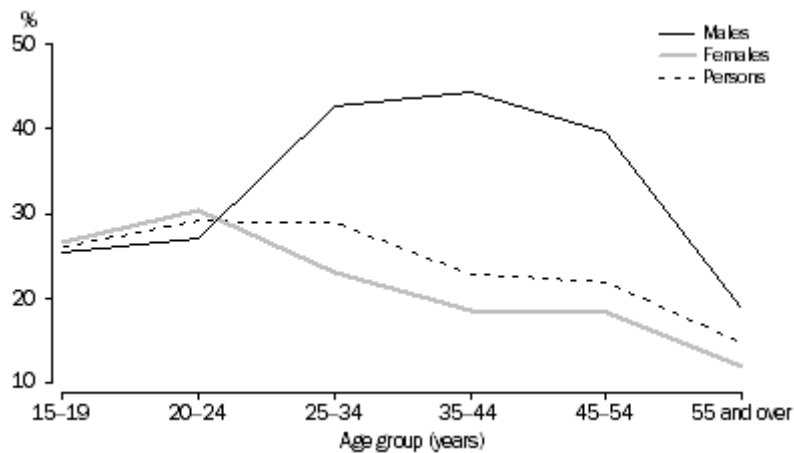
UNDEREMPLOYED PART-TIME WORKERS

In September 2009, there were 735,900 underemployed part-time workers. These people comprise 91% of all underemployed workers.

Of the underemployed part-time workers:

- 61% were women
- 20% were aged 35-44 years and a further 18% were aged 25-34 years
- 61% reported they would not prefer to change employer to work more hours, 24% would prefer to change employer while the remaining 16% had no preference.

UNDEREMPLOYED PART-TIME WORKERS AS A PROPORTION OF PART-TIME WORKERS, Age by sex



Part-time workers aged 20-24 and 25-34 years had the highest incidence of underemployment, with 29% of part-time workers in both of these age groups underemployed. The proportion of part-time workers who were underemployed generally decreased with age.

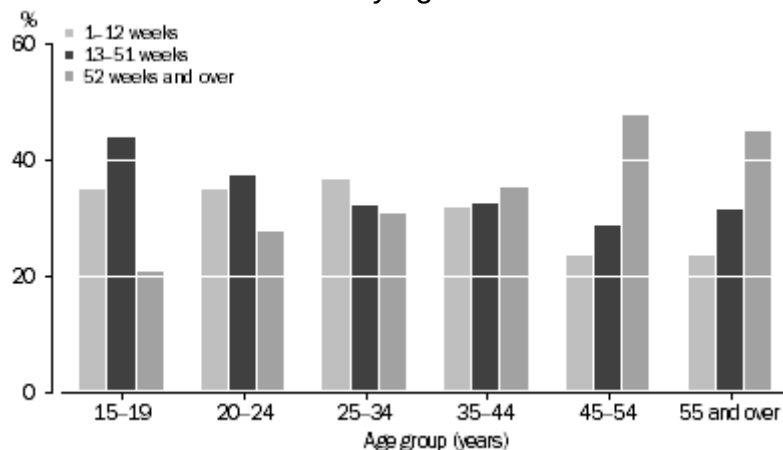
While there were more underemployed part-time women than men (452,100 compared with 283,800), the incidence of underemployment for part-time workers was higher for men (30%) than women (20%). This was the case in all age groups except for those aged 15-19 and 20-24 years. The largest percentage point difference was for those aged 35-44 years (44% for men and 18% for women) and 45-54 years (40% for men and 18% for women).

Underemployed part-time men were more likely to report that they would move intrastate if offered a suitable job (32%) than women (21%), whereas 23% of underemployed part-time men and 14% of women reported that they would move interstate if offered a suitable job.

There was a higher proportion of people who reported uncertainty about moving intrastate than interstate if offered a suitable job in September 2009 (12% of underemployed part-time workers might move or did not know if they would move intrastate, compared with 10% for interstate).

Duration of current period of insufficient work

UNDEREMPLOYED PART-TIME WORKERS, Duration of current period of insufficient work by age

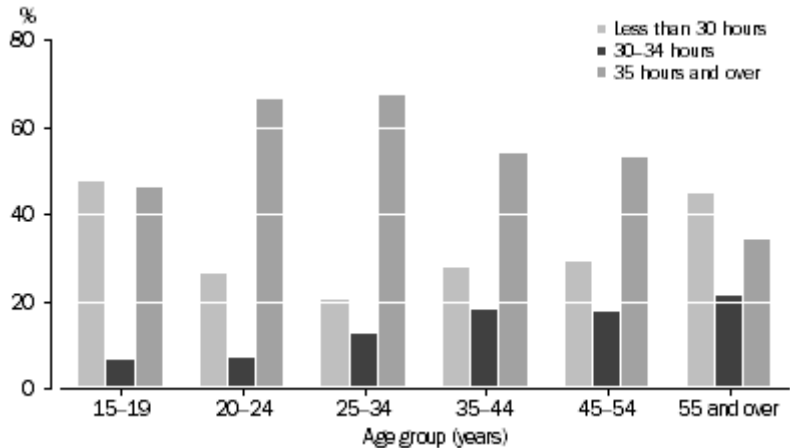


Older people generally had a longer duration of underemployment than younger people. For example, just over one fifth (21%) of 15-19 year old underemployed part-time workers had

experienced insufficient work for one year or more. In contrast, 48% of those aged 45-54 years, and 45% of those aged 55 years and over had insufficient work for one year or more.

For those aged 45-54 years, the median duration of the current period of insufficient work was 39 weeks (34 weeks for men and 52 weeks for women) and for those aged 50 and over the median duration was 34 weeks. Overall, the median duration of the current period of insufficient work for underemployed part-time workers was 26 weeks.

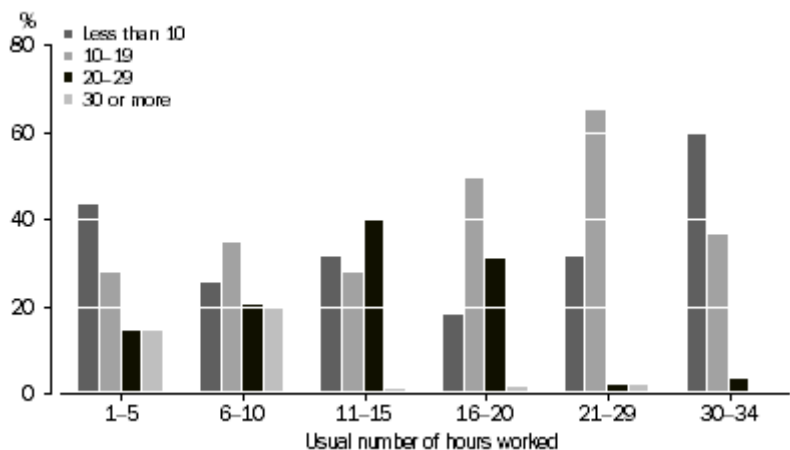
UNDEREMPLOYED PART-TIME WORKERS, Preferred number of total hours by age



Over half (55%) of underemployed part-time workers would prefer to work a total of 35 hours or more per week. For those aged 20-24 years, 66% preferred to work a total of 35 hours or more per week, while for those aged 15-19 years, 48% preferred to work a total of less than 30 hours per week.

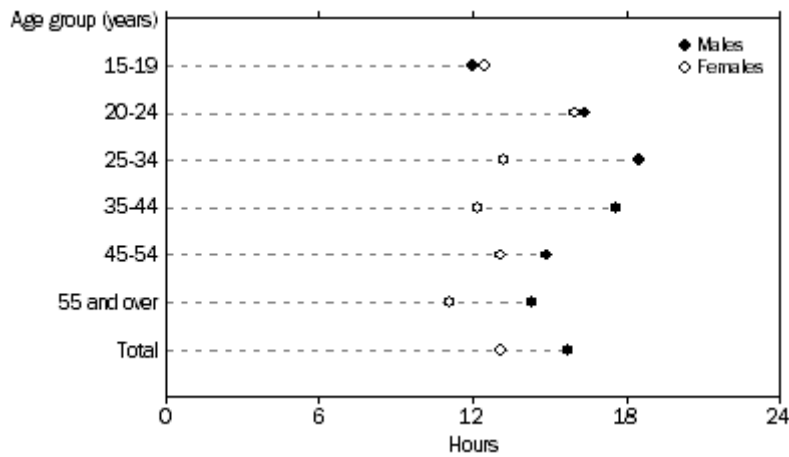
Preferred number of extra hours

UNDEREMPLOYED PART-TIME WORKERS, Preferred number of extra hours by usual number of hours worked



For underemployed part-time workers, the preferred number of extra hours varied with the number of hours they usually worked. For example, over half (57%) of those who usually worked 1-5 hours a week preferred 10 or more extra hours per week, whereas of those who worked 30-34 hours a week, 60% preferred to work less than 10 extra hours per week.

MEAN PREFERRED NUMBER OF EXTRA HOURS, By age



The mean preferred number of extra hours per week for underemployed part-time workers was 14.1 hours, compared with 13.4 hours in September 2008. The mean preferred number of extra hours was lowest for people aged 15-19 years (12.3 hours), and highest for those aged 20-24 years (16.2 hours). On average, men preferred to work an extra 15.7 hours per week compared with women who preferred to work an extra 13.1 hours per week.

Looking for work with more hours

Of the 735,900 underemployed part-time workers, around half (358,900) had looked for work with more hours at some time during the four weeks prior to the survey. Of the 452,100 underemployed part-time women, 45% were looking for work with more hours. By comparison, of the 283,800 underemployed part-time men, 57% were looking for work with more hours.

The most common step taken to find work with more hours by underemployed part-time workers was 'asked current employer for more work' (60%), followed by 'contacted prospective employers' (55%), 'searched Internet sites' and 'looked in newspapers' (both 50%).

The main difficulty in finding work with more hours most commonly reported by underemployed part-time workers was 'no vacancies in line of work' (21%), followed by 'no vacancies at all' (16%). The largest percentage point difference between men and women was for 'unsuitable hours' (5% of men and 9% of women).

Approximately 7% of underemployed part-time workers who had looked for work with more hours reported that they had 'no difficulties' in finding work with more hours, a decrease from 10% in 2008.

UNDEREMPLOYED FULL-TIME WORKERS

There were 7.7 million full-time workers in September 2009, accounting for 71% of all employed people. Of those who usually worked full-time, 1.1 million people (14%) worked less than 35 hours in the reference week, with 75,700 (7%) of these people working less hours due to economic reasons.

About this Release

Provides information on visible underemployment. Persons who worked less than 35 hours in the week prior to the survey who would have preferred to work more hours were asked about whether they were looking for work with more hours, available to start work with more hours, and their experience in looking for work with more hours. Other information includes, the duration of the current period of insufficient work, and the number of extra hours preferred. Estimates can be cross-classified by labour force demographics such as State, sex, age, marital status and birthplace.

Explanatory Notes

Explanatory Notes

EXPLANATORY NOTES

INTRODUCTION

1 The statistics in this publication were compiled from data collected in the Underemployed Workers Survey conducted throughout Australia in September 2009 as a supplement to the Australian Bureau of Statistics (ABS) monthly Labour Force Survey (LFS). Respondents to the monthly LFS who were within the scope of the supplementary survey were asked further questions.

2 The publication Labour Force, Australia (cat. no. 6202.0) contains information about survey design, sample redesign, scope, coverage and population benchmarks relevant to the monthly LFS, which also apply to supplementary surveys. It also contains definitions of demographic and labour force characteristics, and information about telephone interviewing relevant to both the monthly LFS and supplementary surveys.

CONCEPTS, SOURCES AND METHODS

3 The conceptual framework used in Australia's LFS aligns closely with the standards and guidelines set out in the Resolutions of the International Conference of Labour Statisticians. Descriptions of the underlying concepts and structure of Australia's labour force statistics, and the sources and methods used in compiling these estimates, are presented in Labour Statistics: Concepts, Sources and Methods (cat. no. 6102.0.55.001).

SCOPE

4 The scope of the LFS is restricted to people aged 15 years and over and excludes the following people:

- members of the permanent defence forces
- certain diplomatic personnel of overseas governments, customarily excluded from the census and estimated populations
- overseas residents in Australia
- members of non-Australian defence forces (and their dependants).

5 Students at boarding schools, patients in hospitals, residents of homes (e.g. retirement homes, homes for people with disabilities), and inmates of prisons are excluded from all supplementary surveys.

6 This supplementary survey was conducted in both urban and rural areas in all states and territories but excluded people living in Indigenous communities in very remote parts of Australia.

COVERAGE

7 The estimates in this publication relate to people covered by the survey in September 2009. In the LFS, coverage rules are applied which aim to ensure that each person is associated with only one dwelling and hence has only one chance of selection in the survey. See Labour Force, Australia (cat. no. 6202.0) for more details.

SAMPLE SIZE

8 Supplementary surveys are not always conducted on the full LFS sample. Since August 1994, the sample for supplementary surveys has been restricted to no more than seven-eighths of the LFS sample.

9 The LFS sample size in September 2009 was approximately 9% higher than the sample size in September 2008. This is due to re-instated sample that was cut from the Labour Force Survey (LFS) and supplementary surveys from July 2008. Detailed information about the sample reduction/re-instatement is provided in Information Paper: Labour Force Survey. Sample Design, Nov 2007 (Third edition) (cat. no. 6269.0).

10 The re-instated sample will still be representative, with selections made across all parts of Australia.

11 The initial sample for the September 2009 LFS consisted of 29,283 private dwelling households and special dwelling units. Of the 23,512 private dwelling households and special dwelling units that remained in the survey after sample loss (e.g. households selected in the survey which had no residents in scope for the LFS, vacant or derelict dwellings and dwellings under construction), approximately 22,362 or 95.1% were fully responding to the Underemployed Workers Survey. The number of completed interviews obtained from these private dwelling households and special dwelling units (after taking into account scope, coverage and subsampling exclusions) was 24,376.

RELIABILITY OF THE ESTIMATES

12 Estimates in this publication are subject to sampling and non-sampling errors:

- Sampling error is the difference between the published estimate and the value that would have been produced if all dwellings had been included in the survey. For more information see the Technical Note.
- Non-sampling errors are inaccuracies that occur because of imperfections in reporting by respondents and interviewers, and errors made in coding and processing data. These inaccuracies may occur in any enumeration, whether it be a full count or a sample. Every effort is made to reduce the non-sampling error to a minimum by careful design of questionnaires, intensive training and supervision of interviewers, and effective processing procedures.

SEASONAL FACTORS

13 The estimates are based on information collected in the survey month and, due to seasonal factors, may not be representative of other months of the year.

CLASSIFICATIONS USED

14 Country of birth data are classified according to the Standard Australian Classification of Countries (SACC), 2008 (cat. no. 1269.0).

15 Educational attainment data are classified according to Australian Standard Classification of Education (ASCED) (cat. no. 1272.0).

COMPARABILITY OF TIME SERIES

16 In September 2008 there was a substantial increase in the number of part-time workers who preferred more hours and underemployed workers. This was due to a change in the question being asked of part-time workers. From September 2008, part-time workers were asked "Would you prefer to work more hours than you usually work?". In previous surveys part-time workers were asked "Would you prefer a job in which you worked more hours a week?". The question was altered to be consistent with the LFS and is now broader and more inclusive of people's situations as it relates to a preference for more hours of work.

17 This change contributed to an additional 115,800 people who were classified as part-time workers who preferred more hours and an additional 131,500 people who were classified as underemployed workers in 2008. Users need to exercise care when comparing the number of part-time workers who preferred more hours and underemployed workers from 2008 onwards with previous releases because of this break in series.

18 From July 2004, a change was made to the category 'considered too young or too old by employers' for the items 'all difficulties in finding work with more hours' and 'main difficulty in finding work with more hours'. The category has been split into 'considered too young by employers' and 'considered too old by employers'.

19 Revisions are made to population benchmarks for the LFS after each five-yearly Census of Population and Housing. The last such revision was made in February 2009 to take account of the results of the 2006 Census of Population and Housing. Estimates from supplementary surveys conducted from and including February 2009 are based on these 2006 population benchmarks.

20 Prior to September 1994, part-time workers who would prefer more hours of work were asked whether they were available to start work with more hours within the subsequent four weeks. From September 1994, an additional question was added to determine their availability to start work with more hours during the reference week. This question was added to the survey so that estimates of underemployment could be more easily aligned with the then current International Labour Organisation (ILO) recommendations on underemployment.

21 As part of the 2001 LFS questionnaire redesign, people who were on short-term unpaid leave initiated by the employer, are now classified as employed. This approach is consistent with ILO recommendations on formal job attachment. Analysis of data from the LFS shows that many of these people usually worked part time, and that a number of these had a preference to work more hours. However, overall, these people contribute only marginally to the change in part-time workers who would prefer more hours.

COMPARABILITY WITH MONTHLY LFS STATISTICS

22 Due to differences in the scope and sample size of this supplementary survey and that of the monthly LFS, the estimation procedure may lead to some small variations between labour force estimates from this survey and those from the monthly LFS.

COMPARABILITY WITH ILO GUIDELINES

23 The ABS definition of underemployment is consistent with the International Labour

Organisation (ILO) guidelines of time-related underemployment adopted in 1998. According to these guidelines, time-related underemployment exists when the hours of work of an employed person are below a threshold, and are insufficient in relation to an alternative employment situation in which the person is willing and available to engage. More specifically, people in time-related underemployment comprise all employed people (as defined) who satisfy the following three criteria:

- willingness to work additional hours - want to work more hours than they currently work. The ILO recommends that those who have actively sought to work additional hours should be distinguished from those who have not
- availability to work additional hours, within a specified period
- worked less than a threshold (determined according to national circumstances) relating to working time - the ABS underemployment framework uses a threshold (35 hours in the reference week) based on the boundary between full-time and part-time work.

24 A more detailed discussion is included in Labour Statistics: Concepts, Sources and Methods (cat. no. 6102.0.55.001), Chapter 5.

PREVIOUS SURVEYS

25 The Underemployed Workers Survey was conducted in May 1985, 1988 and 1991. In 1994, the survey became an annual survey, collected each September. Results of previous surveys were published in: Underemployed Workers, Australia (cat. no. 6265.0); and the standard data service Underemployed Workers, Australia (cat. no. 6265.0.40.001) for 1994 and 1995.

NEXT SURVEY

26 The ABS plans to conduct this survey again in September 2010.

ACKNOWLEDGMENT

27 The ABS draws extensively on information provided freely by individuals, businesses, governments and other organisations. Their continued cooperation is very much appreciated: without it, the wide range of statistics published by the ABS would not be available. Information received by the ABS is treated in strict confidence as required by the Census and Statistics Act 1905.

RELATED PUBLICATIONS

28 ABS publications which may be of interest include:

- Australian Labour Market Statistics (cat. no. 6105.0)
- Barriers and Incentives to Labour Force Participation (cat. no. 6239.0)
- Job Search Experience, Australia (cat. no. 6222.0)
- Labour Force, Australia (cat. no. 6202.0)
- Labour Force Experience, Australia (cat. no. 6206.0)
- Labour Mobility, Australia (cat. no. 6209.0)
- Labour Statistics: Concepts, Sources and Methods (cat. no. 6102.0.55.001)

- Persons Not in the Labour Force, Australia (cat. no. 6220.0)
- Working Time Arrangements, Australia (cat. no. 6342.0)

29 Current publications and other products released by the ABS are available free of charge from the Statistics Page on the ABS website. The ABS also issues a daily Release Advice on the web site which details products to be released in the week ahead.

Glossary

GLOSSARY

Available to start work

Refers to people who were available to start work with more hours either in the reference week, or in the four weeks subsequent to the interview.

Contributing family worker

People who work without pay in an economic enterprise operated by a relative.

Duration of current period of insufficient work

For full-time workers who worked less than 35 hours in the reference week due to economic reasons, refers to the number of weeks they have been working less than 35 hours a week.

For part-time workers who would prefer to work more hours, refers to the number of weeks they have been wanting to work more hours.

As periods of insufficient work are recorded in full weeks and rounded down, this results in a slight understatement of duration.

Economic reasons

Economic reasons for full-time workers having worked less than 35 hours in the reference week are:

- there was no work or not enough work available, e.g. due to material shortages
- they were stood down
- they were on short time.

Employed

People aged 15 years and over who, during the reference week:

- worked for one hour or more for pay, profit, commission or payment in kind, in a job or business or on a farm (comprising employees, employers and own account workers); or
- worked for one hour or more without pay in a family business or on a farm (i.e. contributing family workers); or

- were employees who had a job but were not at work and were:
 - away from work for less than four weeks up to the end of the reference week; or
 - away from work for more than four weeks up to the end of the reference week and received pay for some or all of the four-week period to the end of the reference week; or
 - away from work as a standard work or shift arrangement; or
 - on strike or locked out; or
 - on workers' compensation and expected to return to their job; or
- were employers or own account workers who had a job, business or farm, but were not at work.

Employees

People who:

- worked for a public or private employer; and
- received remuneration in wages, salary, or are paid a retainer fee by their employer and worked on a commission basis, or for tips or piece-rates or payment in kind; or
- operated their own incorporated enterprise with or without hiring employees.

Employers

People who operate his or her own unincorporated economic enterprise or engage independently in a profession or trade, and hires one or more employees.

Full-time workers

Employed people who usually worked 35 hours or more a week (in all jobs) or others who, although usually worked less than 35 hours a week, worked 35 hours or more during the reference week.

Fully employed workers

Employed people who:

- worked full time during the reference week (including people who usually work part time but worked full time in the reference week); or
- usually work full time but worked less than 35 hours in the reference week for non-economic reasons (such as illness or injury, leave holiday or flextime, or personal reasons); or
- part-time workers who would not prefer to work additional hours.

Interstate

Refers to whether people were prepared to move to another state or territory if offered a suitable job.

Intrastate

Refers to whether people were prepared to move to another part of their state or territory if offered a suitable job.

Level of highest educational attainment

Level of highest educational attainment identifies the highest achievement a person has attained in any area of study. It is not a measurement of the relative importance of different fields of study but a ranking of qualifications and other educational attainments regardless of the particular area of study or the type of institution in which the study was undertaken.

Years 12, 11 and 10 include people who are currently undertaking school study (See Appendix 1 for more information).

Looking for work with more hours

Looked for work with more hours at some time during the four weeks up to the end of the reference week.

Mean duration of insufficient work

The mean duration of insufficient work is obtained by dividing the aggregate number of weeks a group has had insufficient work by the number of people in that group.

Mean preferred number of extra hours

The mean preferred number of extra hours is obtained by dividing the total preferred number of extra hours reported by a group by the number of people in that group.

Median duration of insufficient work

The median duration of insufficient work is obtained by dividing underemployed workers into two equal groups, one comprising people whose duration of insufficient work is above the mid point, and the other comprising people whose duration is below it.

Non-economic reasons

Non-economic reasons for full-time workers having worked less than 35 hours in the reference week include:

- holiday, flextime or study leave
- own illness or injury or sick leave
- standard work arrangements, shift work or rostered day(s) off
- on strike, locked out or took part in an industrial dispute
- bad weather or plant breakdown
- began, left or lost job during the reference week
- personal reasons.

Not available to start work

Refers to people who were not available to start work with more hours either in the reference week, or in the four weeks following the interview.

Not fully employed

People who are not fully employed comprise part-time workers who would prefer to work more hours, and full-time workers who worked part-time hours in the reference week for

economic reasons.

Own account workers

People who operate his or her own unincorporated economic enterprise or engage independently in a profession or trade, and hires no employees.

Part-time workers

Employed people who usually worked less than 35 hours a week (in all jobs) and either did so during the reference week, or were not at work during the reference week.

Preferred number of extra hours

The number of extra hours a week an underemployed worker would have preferred to work.

Preferred total number of hours

The total number of hours per week an underemployed worker would prefer to work.

Reference week

The week preceding the week in which the interview was conducted.

Status in employment

Employed people classified by whether they were employees, employers, own account workers, or contributing family workers.

Suitable job

Job with the preferred number of hours.

Underemployed workers

Underemployed workers are employed people who would prefer, and are available for, more hours of work than they currently have. They comprise:

- part-time workers who would prefer to work more hours and were available to start work with more hours, either in the reference week or in the four weeks subsequent to the survey
- full-time workers who worked part-time hours in the reference week for economic reasons (such as being stood down or insufficient work being available). It is assumed that these people would prefer to work full time in the reference week and would have been available to do so.

Underemployment rate

The number of underemployed workers expressed as a percentage of the labour force.

Usual number of hours

The number of hours usually worked in a week.

Abbreviations

ABBREVIATIONS

'000	thousand
ABS	Australian Bureau of Statistics
ASCED	Australian Standard Classification of Education
ILO	International Labour Organization
LFS	Labour Force Survey
n.f.d.	not further defined
OMIE	owner manager of incorporated enterprise
RSE	relative standard error
SACC	Standard Australian Classification of Countries
SE	standard error

EDUCATIONAL ATTAINMENT (Appendix)

APPENDIX 1 EDUCATIONAL ATTAINMENT

CLASSIFICATION OF EDUCATION

In 2001, the ABS Classification of Qualifications (ABSCQ) (cat. no. 1262.0) was replaced by the Australian Standard Classification of Education (ASCED) (cat. no. 1272.0). The ASCED is a national standard classification which can be applied to all sectors of the Australian education system including schools, vocational education and training and higher education. ASCED replaces a number of classifications previously used in administrative and statistical systems, including the ABSCQ. The ASCED comprises two classifications: Level of Education and Field of Education.

Level of Highest Educational Attainment can be derived from information on Highest Year of School Completed and Level of Highest Non-school Qualification. The derivation process determines which of the 'non-school' or 'school' attainments will be regarded as the highest. Usually the higher ranking attainment will be self-evident, but in some cases some Secondary Education is regarded, for the purposes of obtaining a single measure, as higher than some Certificate level attainments.

The following decision table is used to determine which of the responses to questions on Highest Year of School Completed (coded to ASCED Broad Level 6) and Level of Highest Non-school Qualification (coded to ASCED Broad Level 5) will be regarded as the highest. It is emphasised that this table was designed for the purpose of obtaining a single value for the output variable Level of Highest Educational Attainment and is not intended to convey any other ordinality.

Decision Table: Level of Highest Educational Attainment							
ASCED LEVEL OF EDUCATION CODES	Certificate n.f.d. (500)	Certificate III or IV n.f.d. (510)	Certificate IV (511)	Certificate III (514)	Certificate I or II n.f.d. (520)	Certificate II (521)	Certificate I (524)
Secondary Education n.f.d. (600)	Certificate n.f.d.	Certificate III or IV n.f.d.	Certificate IV	Certificate III	Certificate I or II n.f.d.	Certificate II	Certificate I
Senior Secondary Education n.f.d. (610)	Senior Secondary n.f.d.	Certificate III or IV n.f.d.	Certificate IV	Certificate III	Senior Secondary n.f.d.	Senior Secondary n.f.d.	Senior Secondary n.f.d.
Year 12 (611)	Year 12	Certificate III or IV n.f.d.	Certificate IV	Certificate III	Year 12	Year 12	Year 12
Year 11 (613)	Year 11	Certificate III or IV n.f.d.	Certificate IV	Certificate III	Year 11	Year 11	Year 11
Junior Secondary Education n.f.d. (620)	Certificate n.f.d.	Certificate III or IV n.f.d.	Certificate IV	Certificate III	Certificate I or II n.f.d.	Certificate II	Certificate I
Year 10 (621)	Year 10	Certificate III or IV n.f.d.	Certificate IV	Certificate III	Year 10	Certificate II	Year 10
Year 9 (622)	Certificate n.f.d.	Certificate III or IV n.f.d.	Certificate IV	Certificate III	Certificate I or II n.f.d.	Certificate II	Certificate I
Year 8 (623)	Certificate n.f.d.	Certificate III or IV n.f.d.	Certificate IV	Certificate III	Certificate I or II n.f.d.	Certificate II	Certificate I
Year 7 (624)	Certificate n.f.d.	Certificate III or IV n.f.d.	Certificate IV	Certificate III	Certificate I or II n.f.d.	Certificate II	Certificate I

The decision table is also used to rank the information provided in a survey about the qualifications and attainments of a single individual. It does not represent any basis for comparison between differing qualifications. For example, a person whose Highest Year of School Completed was Year 12, and whose Level of Highest Non-school Qualification was a Certificate III, would have those responses crosschecked on the decision table and would as a result have their Level of Highest Educational Attainment output as Certificate III. However, if the same person answered 'Certificate' to the highest non-school qualification question, without offering any further detail, it would be crosschecked against Year 12 on the decision table as 'Certificate not further defined'. The output would then be 'Year 12'. The decision table, therefore, does not necessarily imply that one qualification is 'higher' than the other.

POPULATIONS AND DATA ITEMS LIST (Appendix)

APPENDIX 2 POPULATIONS AND DATA ITEMS LIST

DATA AVAILABLE ON REQUEST

The ABS has a range of data available on request from the Underemployed Workers Survey. This section lists the data items and populations which relate to the survey. More detailed breakdowns of some data items may also be available on request.

The population(s) for a particular data item refers to the person in the survey to whom the data item relates. Where alternative output categories are available for the same data item.

these are shown and the data item name is followed by a bracketed numeral (e.g. Country of birth (2)).

For more information about ABS data available on request, contact Labour Market Statistics Section on Canberra (02) 6252 7206, or by facsimile on (02) 6252 7102, or by email to <labour.statistics@abs.gov.au>.

Population 1:

Employed persons

Population 2:

Full-time workers

Population 3:

Part-time workers

Population 4:

Part-time workers who would prefer more hours

Population 5:

Part-time workers who would prefer more hours who had been looking for work with more hours or were available to start work with more hours in the reference week or within four weeks

Population 6:

Underemployed part-time workers

Population 7:

Underemployed workers

Data items		Populations
1	State or territory of usual residence	All
	New South Wales	
	Victoria	
	Queensland	
	South Australia	
	Western Australia	
	Tasmania	
	Northern Territory	
	Australian Capital Territory	
2	Area of usual residence	All
	State capital city	

	Balance of state/territory	
3	Region of usual residence	All
	Standard labour force dissemination regions	
4	Sex	All
	Males	
	Females	
5	Marital status	All
	Married	
	Not married	
6	Relationship in household	All
	Family member	
	Husband, wife or partner	
	With dependants	
	Without dependants	
	Lone parent	
	With dependants	
	Without dependants	
	Dependent student	
	Non-dependent child	
	Other family person	
	Non-family member	
	Lone person	
	Not living alone	
	Relationship not determined	
7A	Country of birth and period of arrival	All
	Born in Australia	
	Born overseas	
	Arrived before 1971	
	Arrived 1971-1980	
	Arrived 1981-1990	
	Arrived 1991-2000	
	Arrived 2001 to survey date	
7B	Country of birth (1)	All
	Born in Australia	
	Born overseas	
	Born in main English-speaking countries	
	Born in other than main English-speaking countries	
7C	Country of birth (2)	All
	Born in Australia	
	Born overseas	
	Oceania and Antarctica	
	North-West Europe	
	Southern and Eastern Europe	
	North Africa and the Middle East	
	South-East Asia	
	North-East Asia	
	Southern and Central Asia	
	Americas	
	Sub-Saharan Africa	
8	Age group (years)	All
	15-19	
	20-24	
	25-34	
	35-44	
	45-54	
	55-59	
	60-64	
	65-69	
	70 and over	
	Note: Age collected in single years	
9A	Underemployment status	7
	Worked less than 35 hours in the reference week for economic reasons	
	Part-time workers who would prefer more hours who were available to start work with more hours in the reference week or within four weeks	
	Looking and available to start	
	Not looking but available to start	

9B	Whether looking and/or available	4-6
	Had been looking for work with more hours	
	Looking and available to start	
	Looking and available in the reference week	
	Looking and not available in the reference week but available within four weeks	
	Looking and not available to start	
	Had not been looking for work with more hours	
	Not looking but available to start	
	Not looking but available in the reference week	
	Not looking and not available in the reference week but available within four weeks	
	Not looking and not available to start	
9C	Whether available and/or looking	4-6
	Available to start work with more hours	
	Available in the reference week	
	Looking	
	Not looking	
	Available within four weeks (but not in the reference week)	
	Looking	
	Not looking	
	Not available to start work with more hours	
	Looking	
	Not looking	
10	Full-time or part-time status	All
	Employed persons	
	Full-time workers	
	Worked 35 hours or more in the reference week	
	Worked less than 35 hours in the reference week	
	For non-economic reasons	
	For economic reasons	
	Part-time workers	
	Would not prefer to work more hours	
	Would prefer to work more hours	
	Prefers more part-time hours	
	Prefers full-time hours	
11	Whether fully employed	All
	Fully employed	
	Part-time workers who would prefer more hours and persons who worked less than 35 hours in the reference week for economic reasons	
12	Status in employment	All
	Employees	
	Employers	
	Own account workers	
	Contributing family workers	
13	Number of hours worked in the reference week	4-7
	0-5	
	6-10	
	11-15	
	16-20	
	20-29	
	30-34	
	35 or more	
	Note: Hours worked collected in single hours	
14	Type of insufficient work	4-6
	Full-time	
	Part-time	
15	Duration of current period of insufficient work	4-7
	1 week and under 4 weeks	
	4 weeks and under 13 weeks	
	13 weeks and under 52 weeks	
	52 weeks and over	
	Note: Period of insufficient work collected in single weeks	
16A	Level of highest educational attainment	4-7
	Postgraduate Degree	
	Graduate Diploma/Graduate Certificate	
	Bachelor Degree	

	Advanced Diploma/Diploma	
	Certificate III/IV	
	Certificate I/II	
	Certificate not further defined	
	Year 12	
	Year 11	
	Year 10 or below	
	Other education	
	Level not determined	
	No educational attainment	
16B	Level of highest non-school qualification	4-7
	With a non-school qualification	
	Postgraduate Degree	
	Graduate Diploma/Graduate Certificate	
	Bachelor Degree	
	Advanced Diploma/Diploma	
	Certificate III/IV	
	Certificate I/II	
	Certificate not further defined	
	Level not determined	
	Without a non-school qualification	
16C	Highest year of school completed	4-7
	Year 12	
	Year 11	
	Year 10	
	Year 9	
	Year 8 or below	
	Never attended school	
16D	Highest non-school qualification and whether qualification obtained overseas or within Australia	4-7
	Born in Australia	
	Born overseas	
	With a non-school qualification	
	Qualification obtained overseas	
	Qualification obtained in Australia	
	Without a non-school qualification	
17	Whether would move interstate if offered a suitable job	4-7
	Would move interstate	
	Would not move interstate	
	Might move interstate	
	Did not know	
18	Whether would move intrastate if offered a suitable job	4-7
	Would move intrastate	
	Would not move intrastate	
	Might move intrastate	
	Did not know	
19	Whether would prefer to change occupation to work more hours	4-7
	Would prefer to change occupation	
	Would prefer not to change occupation	
	No preference	
20	Whether would prefer to change employer to work more hours	4-7
	Would prefer to change employer	
	Would prefer not to change employer	
	No preference	
21	All steps taken to find work with more hours in the last four weeks	4-6
	Asked current employer for more work	
	Contacted prospective employers	
	Registered with Centrelink	
	Checked Centrelink touchscreens	
	Checked factory noticeboards	
	Contacted an employment agency	
	Looked in newspapers	
	Searched Internet sites	
	Answered a newspaper advertisement for a job	
	Advertised or tendered for work	
	Contacted friends or relatives	
	Other steps taken to find work	

	Had not been looking for work with more hours	
22	Whether registered with Centrelink	4-6
	Registered with Centrelink for job search assistance	
	Not registered with Centrelink for job search assistance	
	Had not been looking for work with more hours	
23	Preferred number of extra hours	4-6
	Less than 10 hours	
	10-19	
	20-29	
	30 or more	
	Note: Preferred extra hours collected in single hours	
24	Main difficulty in finding work with more hours	4-6
	Had been looking for work with more hours	
	Own ill health or disability	
	Considered too young by employers	
	Considered too old by employers	
	Unsuitable hours	
	Too far to travel/transport problems	
	Lacked necessary skills or education	
	Language difficulties	
	Insufficient work experience	
	No vacancies in line of work	
	Too many applicants for available jobs	
	No vacancies at all	
	Difficulties with ethnic background	
	Difficulties in finding child care	
	Other family responsibilities	
	Other difficulties	
	No difficulties reported	
	Had not been looking for work with more hours	
25	Hours usually worked	4-6
	1-5	
	6-10	
	11-15	
	16-20	
	21-29	
	30-34	
	Note: Hours usually worked collected in single hours	
26	Preferred total number of hours	4-6
	Less than 30 hours	
	30-34	
	35-39	
	40 or more	
	Note: Preferred total hours collected in single hours	
27	Employment type	All
	Employees (excluding OMIEs)	
	Owner managers of incorporated enterprises	
	Owner managers of unincorporated enterprises	
	Contributing family workers	

SUPPLEMENTARY SURVEYS (Appendix)

APPENDIX 3 SUPPLEMENTARY SURVEYS

SUPPLEMENTARY SURVEYS

The Monthly Population Survey program collects data on particular aspects of the labour

force. The following is an historical list of supplementary surveys to the monthly labour force surveys. Data from these surveys are available on request and can be obtained by contacting the ABS.

	cat. no.	Frequency	Latest issue
Monthly Population Supplementary Surveys			
Child Care, Australia	4402.0	Irregular	June 2005
Child Employment, Australia	6211.0	Irregular	June 2006
Education and Work, Australia	6227.0	Annual	May 2009
Employee Earnings, Benefits, and Trade Union Membership, Australia	6310.0	Annual	August 2008
Forms of Employment, Australia	6359.0	Annual	November 2008
Job Search Experience, Australia	6222.0	Annual	July 2009
Labour Force Experience, Australia	6206.0	Biennial	February 2009
Labour Force Status and Other Characteristics of Migrants, Australia	6250.0	Irregular	November 2007
Labour Mobility, Australia	6209.0	Biennial	February 2008
Locations of Work, Australia	6275.0	Irregular	November 2008
Multiple Jobholding, Australia(a)	6216.0	Irregular	August 1997
Persons Not in the Labour Force, Australia	6220.0	Annual	September 2008
Underemployed Workers, Australia	6265.0	Annual	September 2009
Working Time Arrangements, Australia(b)	6342.0	Irregular	November 2006
Multi-Purpose Household Surveys			
Barriers and Incentives to Labour Force Participation, Australia	6239.0	Biennial	2008-2009
Retirement and Retirement Intentions, Australia	6238.0	Biennial	2008-2009
Work-Related Injuries, Australia	6324.0	Irregular	2005-2006

(a) Latest data available on request July 2001.

(b) This product replaces the publication Working Arrangements, Australia (cat. no. 6342.0).

Quality Declaration - Summary

QUALITY DECLARATION - SUMMARY

INSTITUTIONAL ENVIRONMENT

For information on the institutional environment of the Australian Bureau of Statistics (ABS), including the legislative obligations of the ABS, financing and governance arrangements, and mechanisms for scrutiny of ABS operations, please see ABS Institutional Environment.

RELEVANCE

The Underemployed Workers Survey collects a range of information about the characteristics of underemployed workers aged 15 years and over. These include the number of hours usually worked, number of preferred hours, steps taken to find work with more hours, and difficulties in finding work with more hours.

Underemployed workers are employed people who would prefer and are available for more hours of work than they currently have. They comprise:

- Part-time workers who want and are available for, more hours of work than they currently have, either in the reference week or in the four weeks subsequent to the survey

- Full-time workers who worked part-time hours during the reference week for economic reasons (such as being stood down or insufficient work available). It is assumed that these people would prefer to work full-time in the reference week and would have been available to do so.

The number of underemployed workers contributes to measuring underutilised labour resources in the economy.

TIMELINESS

The Underemployed Workers Survey is conducted annually during September as a supplement to the monthly Labour Force Survey. Results from this survey are released approximately six months after the completion of enumeration (i.e. during February) in the publication Underemployed Workers, Australia (cat. no. 6265.0).

The Underemployed Workers Survey is expected to be conducted again in September 2010.

ACCURACY

The LFS sample size in September 2009 was approximately 9% higher than the sample size in September 2008. This was due to a re-instated sample that was reduced from Labour Force Survey (LFS) and supplementary surveys from July 2008. Detailed information about the sample reduction and re-instatement is provided in Information Paper: Labour Force Survey Sample Design, Nov 2007 (Third edition) (cat. no. 6269.0). The re-instated sample will still be representative, with selections made across all parts of Australia.

Estimates from the Underemployed Workers Survey are subject to sampling and non-sampling errors. Relative standard error (RSE) is a measure of the size of the sampling error affecting an estimate, i.e. the error introduced by basing estimates on a sample of the population rather than the full population. Non-sampling errors are inaccuracies that occur due to imperfections in reporting by respondents and interviewers, and errors made in coding and processing data.

The Underemployed Workers Survey was designed primarily to provide estimates at the Australia level. Broad estimates are available for State or Territory and Capital city/Balance of state/territory. Users should exercise caution when using estimates at these level because of the presence of high sampling errors. RSEs are available for all estimates in the Technical Note of the publication.

COHERENCE

The Underemployed Workers Survey is the primary ABS data source on underemployment. Summary information is also collected in the Labour Force Survey on a quarterly basis.

The conceptual framework used for this survey is described in Chapter 5 of Labour Statistics: Concepts, Sources and Methods (cat. no. 6102.0.55.001). The statistics in this survey are comparable with other labour statistics produced by the ABS. The ABS definition

of underemployment is consistent with the International Labour Organisation definition of time-related underemployment adopted in 1998.

The ABS has been conducting the Underemployed Workers Survey irregularly since 1985, and annually since 1994. Key changes made to the Underemployed Workers Survey since 1994 include:

- Revisions were made to population benchmarks for the Labour Force Survey and Supplementary Surveys in 2009, to take into account the 2006 Census of Population and Housing. Estimates from supplementary surveys conducted from and inclusive of February 2009 are based on the revised benchmarks.
- Changes to improve alignment with recommendations from the International Labour Organisation (ILO) were made in 1994 for underemployment and in 2001 for formal job attachment.

For more information on changes to the survey see Chapter 21.14 of Labour Statistics: Concepts, Sources and Methods (cat. no. 6102.0.55.001).

INTERPRETABILITY

The Underemployed Workers publication contains tables with footnoted data and a Summary of Findings to aid interpretation of the results of the survey. Detailed Explanatory Notes, a Technical Note and a Glossary are also included providing information on the terminology, classifications and other technical aspects associated with these statistics.

Further commentary is often available through articles and data published in other ABS products, including:

- Australian Labour Market Statistics (cat. no. 6105.0) - refer to Appendix 2 for past articles.
- Australian Social Trends (cat. no. 4102.0) - refer to the Cumulative list of articles for past articles
- Year Book, Australia (cat. no. 1301.0) - refer to the 'Work' chapter.

ACCESSIBILITY

Underemployed Workers, Australia (cat. no. 6265.0) is released electronically via the ABS website as a PDF publication. Additional data may be available on request (Subject to data quality). For a list of data items available see Appendix 2 of the publication. Note that detailed data can be subject to high relative standard errors and in some cases may result in data being confidentialised.

Labour underutilisation measures were published in Underemployed Workers, Australia (cat. no. 6265.0) in 2006-2008 however are no longer presented in this publication. These measures are published annually in the April issue of Australian Labour Market Statistics (cat. no. 6105.0) and within Measures of Australia's Progress: Summary Indicators (cat. no. 1383.0.55.001). From August 2009 they are also presented in the monthly Labour Force Survey (cat. no. 6202.0).

For further information about these or related statistics, contact the National Information and Referral Centre on 1300 135 070 or the Labour Market Section in Canberra on (02) 6252 7206 or via email to <labour.statistics@abs.gov.au>.

Quality Declaration - Relevance

Employed

People aged 15 years and over who, during the reference week:

- worked for one hour or more for pay, profit, commission or payment in kind, in a job or business or on a farm (comprising employees, employers and own account workers); or
- worked for one hour or more without pay in a family business or on a farm (i.e. contributing family workers); or
- were employees who had a job but were not at work and were:
 - away from work for less than four weeks up to the end of the reference week; or
 - away from work for more than four weeks up to the end of the reference week and received pay for some or all of the four-week period to the end of the reference week; or
 - away from work as a standard work or shift arrangement; or
 - on strike or locked out; or
 - on workers' compensation and expected to return to their job; or
- were employers or own account workers who had a job, business or farm, but were not at work.

Full-time workers

Employed people who usually worked 35 hours or more a week (in all jobs) or others who, although usually worked less than 35 hours a week, worked 35 hours or more during the reference week.

Part-time workers

Employed people who usually worked less than 35 hours a week (in all jobs) and either did so during the reference week, or were not at work during the reference week.

DATA QUALITY (Technical Note)

TECHNICAL NOTE DATA QUALITY

INTRODUCTION

1 Estimates in this publication are based on information obtained from occupants of a sample of dwellings, and are subject to sampling variability. That is, they may differ from those estimates that would have been produced if all dwellings had been included in the survey. One measure of the likely difference is given by the standard error (SE), which indicates the extent to which an estimate might have varied by chance because only a sample of dwellings was included. There are about two chances in three (67%) that a sample estimate will differ by less than one SE from the number that would have been obtained if all dwellings had been included, and about 19 chances in 20 (95%) that the difference will be less than two SEs. Another measure of the likely difference is the relative standard error (RSE), which is obtained by expressing the SE as a percentage of the

estimate.

2 Due to space limitations, it is impractical to print the SE of each estimate in the publication. Instead, a table of SEs is provided to determine the SE for an estimate from the size of that estimate (see table T1). The SE table is derived from a mathematical model, referred to as the 'SE model', which is created using data from a number of past Labour Force Surveys. It should be noted that the SE model only gives an approximate value for the SE for any particular estimate, since there is some minor variation between SEs for different estimates of the same size.

3 The LFS sample size in September 2009 was approximately 9% higher than the sample size in 2008. This is due to re-instated sample that was cut from Labour Force Survey (LFS) and supplementary surveys from July 2008. In combination, the sample re-instatement is expected to decrease the standard errors for estimates from the supplementary surveys by approximately 4% at the broad aggregate level, relative to estimates from 2008 (standard errors will vary at lower aggregate levels). Detailed information about the sample reduction/re-instatement is provided in Information Paper: Labour Force Survey Sample Design, Nov 2007 (Third edition) (cat. no. 6269.0).

CALCULATION OF STANDARD ERROR

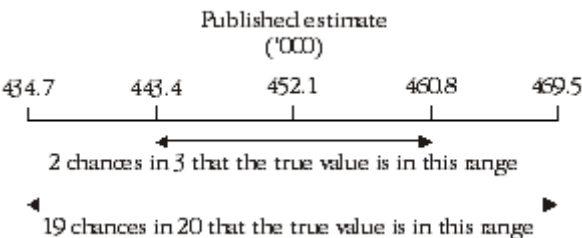
4 An example of the calculation and the use of SEs in relation to estimates of persons is as follows. Table 4 shows the estimated number of female underemployed part-time workers was 452,100. Since this estimate is between 300,000 and 500,000, table T1 shows that the SE for Australia will lie between 7,300 and 9,200 and can be approximated by interpolation using the following general formula:

SE of estimate

$$= \text{lower SE} + \left(\left(\frac{\text{size of estimate} - \text{lower estimate}}{\text{upper estimate} - \text{lower estimate}} \right) \times (\text{upper SE} - \text{lower SE}) \right)$$
$$= 7,300 + \left(\left(\frac{452,100 - 300,000}{500,000 - 300,000} \right) \times (9,200 - 7,300) \right)$$

= 8,700 (rounded to the nearest 100)

5 Therefore, there are about two chances in three that the value that would have been produced if all dwellings had been included in the survey will fall within the range 443,400 to 460,800 and about 19 chances in 20 that the value will fall within the range 434,700 to 469,500. This example is illustrated in the following diagram.



6 In general, the size of the SE increases as the size of the estimate increases. Conversely, the RSE decreases as the size of the estimate increases. Very small estimates are thus subject to such high RSEs that their value for most practical purposes is unreliable. In the tables in this publication, only estimates with RSEs of 25% or less are considered reliable for most purposes. Estimates with RSEs greater than 25% but less than or equal to 50% are preceded by an asterisk (e.g.*3.2) to indicate they are subject to high SEs and should be

used with caution. Estimates with RSEs of greater than 50%, preceded by a double asterisk (e.g. **0.3), are considered too unreliable for general use and should only be used to aggregate with other estimates to provide derived estimates with RSEs of less than 25%.

MEANS AND MEDIANS

7 The RSEs of estimates of mean duration of insufficient work, median duration of insufficient work and mean preferred number of extra hours are obtained by first finding the RSE of the estimate of the total number of persons contributing to the mean or median (see table T1) and then multiplying the resulting number by the following factors:

- mean duration of insufficient work: 1.6
- median duration of insufficient work: 2.5
- mean preferred number of extra hours: 0.7

8 The following is an example of the calculation of SEs where the use of a factor is required. Table 4 shows that the estimated number of male underemployed part-time workers was 283,800 with a median duration of insufficient work of 26 weeks. The SE of 283,800 can be calculated from table T1 (by interpolation) as 7,100. To convert this to an RSE we express the SE as a percentage of the estimate or $7,100/283,800 = 2.5\%$.

9 The RSE of the estimate of median duration of insufficient work is calculated by multiplying this number (2.5%) by the appropriate factor shown in paragraph 7 (in this case 2.5): $2.5 \times 2.5 = 6.3\%$. The SE of this estimate of median duration of insufficient work is therefore 6.3% of 26, i.e. about 2 (rounded to the nearest whole week). Therefore, there are two chances in three that the median duration of insufficient work for males that would have been obtained if all dwellings had been included in the survey would have been within the range 24-28 weeks, and about 19 chances in 20 that it would have been within the range 22-30 weeks.

PROPORTIONS AND PERCENTAGES

10 Proportions and percentages formed from the ratio of two estimates are also subject to sampling errors. The size of the error depends on the accuracy of both the numerator and the denominator. A formula to approximate the RSE of a proportion is given below. This formula is only valid when x is a subset of y.

$$RSE\left(\frac{x}{y}\right) = \sqrt{[RSE(x)]^2 - [RSE(y)]^2}$$

11 Considering the example from paragraph 3, of the 452,100 female underemployed part-time workers, 153,600 or 34.0% had insufficient work for 52 weeks and over. The SE of 153,600 may be calculated by interpolation as 5,500. To convert this to an RSE we express the SE as a percentage of the estimate, or $5,500/153,600 = 3.6\%$. The SE for 452,100 was calculated previously as 8,700, which converted to an RSE is $8,700/452,100 = 1.9\%$. Applying the above formula, the RSE of the proportion is:

$$RSE = \sqrt{(3.6)^2 - (1.9)^2} = 3.1\%$$

12 Therefore, the SE for the proportion of females who have a current period of insufficient work of 52 weeks or more is 1.1 percentage points $(= (34.0/100) \times 3.1)$. Therefore, there are about two chances in three that the proportion of females who have a current period of insufficient work of 52 weeks or more was between 32.9% and 35.1% and 19 chances in 20

that the proportion is within the range 31.8% to 36.2%.

DIFFERENCES

13 Published estimates may also be used to calculate the difference between two survey estimates (of numbers or percentages). Such an estimate is subject to sampling error. The sampling error of the difference between two estimates depends on their SEs and the relationship (correlation) between them. An approximate SE of the difference between two estimates (x-y) may be calculated by the following formula:

14

$$SE(x-y) = \sqrt{[SE(x)]^2 + [SE(y)]^2}$$

15 While this formula will only be exact for differences between separate and uncorrelated characteristics or subpopulations, it is expected to provide a good approximation for all differences likely to be of interest in this publication.

STANDARD ERRORS

T1 STANDARD ERRORS OF ESTIMATES

Size of Estimate (persons)	NSW no.	Vic. no.	Qld. no.	SA no.	WA no.	Tas. no.	NT no.	ACT no.	AUST.	
									SE no.	RSE %
100	320	310	240	190	240	120	80	110	120	120.0
200	440	420	350	260	320	170	120	180	210	105.0
300	520	490	430	310	380	210	150	230	290	96.7
500	640	600	550	380	460	260	200	300	420	84.0
700	730	680	640	430	530	300	230	330	530	75.7
1,000	840	780	750	500	600	340	270	370	670	67.0
1,500	990	910	890	580	710	400	310	400	860	57.3
2,000	1 110	1 020	1 000	650	790	440	340	430	1 010	50.5
2,500	1 200	1 100	1 100	700	850	450	350	450	1 150	46.0
3,000	1 300	1 200	1 150	750	900	500	400	500	1 250	41.7
3,500	1 400	1 250	1 250	800	950	500	400	500	1 350	38.6
4,000	1 450	1 350	1 300	850	1 000	550	450	500	1 450	36.3
5,000	1 600	1 450	1 400	900	1 100	600	500	550	1 650	33.0
7,000	1 800	1 650	1 600	1 000	1 250	650	550	650	1 900	27.1
10,000	2 050	1 850	1 750	1 150	1 400	750	750	750	2 200	22.0
15,000	2 400	2 150	2 000	1 300	1 650	950	1 000	950	2 550	17.0
20,000	2 650	2 400	2 150	1 450	1 800	1 100	1 300	1 100	2 850	14.3
30,000	3 100	2 800	2 500	1 750	2 100	1 350	1 800	1 350	3 200	10.7
40,000	3 400	3 100	2 750	2 000	2 300	1 650	2 250	1 650	3 500	8.8
50,000	3 700	3 350	3 050	2 200	2 550	1 850	2 700	1 850	3 750	7.5
100,000	4 700	4 400	4 150	3 300	3 750	2 650	4 650	2 450	4 750	4.8
150,000	5 550	5 350	5 100	4 250	4 950	3 150	6 400	2 750	5 500	3.7
200,000	6 350	6 250	5 950	5 000	5 950	3 550	8 000	2 950	6 150	3.1
300,000	8 000	7 950	7 550	6 150	7 450	4 050	10 950	3 100	7 300	2.4
500,000	11 200	11 050	10 200	7 700	9 500	4 700	..	3 100	9 200	1.8
1,000,000	16 650	16 850	14 550	9 800	12 100	5 350	12 950	1.3
2,000,000	22 450	24 900	19 600	11 650	14 000	18 800	0.9
5,000,000	28 600	39 800	26 400	13 150	14 600	31 400	0.6
10,000,000	30 650	54 900	30 900	41 900	0.4
15,000,000	47 250	0.3

.. not applicable

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